

UNITED STATES GOVERNMENT

Memorandum

JAN 18 1967

TO : J. E. Sanderson, Forest Supervisor
Nezperce N. F.

FROM : Harold F. Haupt, Principal Forest Hydrologist

SUBJECT: Hydrologic Surveys, Prescriptions and Plans

2530
DATE: January 16, 1967

Act	Act
Adm.	Adm.
Ext.	Ext.
Fin.	Fin.
Gen.	Gen.
Ident.	Ident.
Inv.	Inv.
Lab.	Lab.
Legal	Legal
Plan.	Plan.
Spec.	Spec.
Training	Training
Records	Records
Supv.	Supv.
Tele. Rm.	Tele. Rm.
Director's Sec'y	Director's Sec'y
Chief Clerk	Chief Clerk
Copy Sent	Copy Sent

After reviewing the brief resume of a proposal for determining clearcut size based on watershed considerations, I fully agree with you that it is a start to resolving a complex problem. It is unfortunate we do not have some years of experience in Horse Creek to indicate whether the 20-30% limit is reasonable. There is one question: Does the 20-30% area cutover include the right-of-way for a road, say one that is approaching a clearcut area within a second-order or larger drainage? I assume that it does. If this is the case, the percentage range is probably close to the proper limit for the average watershed.

On the other hand, we may be proven wrong and may need to adjust this percentage downward in certain problem drainages. In contrast, we may find in Main Horse Creek that the percentage might well be stepped up under certain aspect-topographic situations, providing the hydrologic effect (assuming it is detrimental) can be counteracted to some degree by the way we manage the major aspect directly opposite the slope being logged.

In steep terrain the factor of north-south exposure is very important as far as influencing snow-melt rates, etc. Obviously, we should weigh this factor heavily in any management decision based on watershed considerations. In retrospect, there is a major weakness in our Horse Creek Administrative-Research study plan concerning the evaluation of aspect. I believe we can correct it. As a matter of review, in the Main Fork the expected increase in peak flow on the main channel will, we hope, be desynchronized. This will be accomplished by accelerating the time-to-peak flow in side channels that drain south-facing slopes and/or by delaying time-to-peak flow on those draining off north-facing slopes. Because the hydrographic response to manipulative treatment is virtually unknown, each major aspect with its contrasting treatment will be logged separately and evaluated in sequence. Herein lies the weak point. The guaranteed period of sequence may be as short as one year according to the plan (pages 8-9). This is too brief a period,



merely because of the vagaries of weather from one year to the next. I should think that three years would be the very minimum time needed to gain a proper evaluation of north aspect-treatment versus south-aspect treatment. Therefore, I strongly urge we modify the plan accordingly to include a deferment clause in the future sale contract that will guarantee a minimum of three years between the logging of Unit I and Unit III.

I shall be in Grangeville on January 26 to hold a planning conference with Earl Reinsel regarding specific work plans for the 1967 field season. I hope at that time to be able to discuss this proposed modification with you.

Harold F. Haupt